

Colorado Department of Transportation
Structure Inspection and Inventory Report (English Units)

Highway Number (ON) 5D: 470A

Mile Post (ON)11: 13.900 mi

Bridge Key: F-16-MH

Inspection Date: 3/6/2012

Sufficiency Rating: 97.6 Not Eligible

Rgn/Sectn 2E/2M: 68
 Trans Region 2T: 02
 County Code 3: 059
 JEFFERSON
 Place Code 4: 00000
 non-city
 Rte.(On/Under)5A: 1
 Signing Prefix 5B: 3
 Level of Service 5C: 1
 Directional Suffix 5E: 0
 Feature Intersected 6:
 SH 121-WADSWORTH BLVD
 Facility Carried 7:
 SH 470 ML WBND
 Alias Str No.8A:
 Prll Str No. 8P
 F-16-MG
 Location 9: 328.05117409
 3.2 MI W - JCT US 85 + SH
 Max Clr 10: 99.99
 BaseHiway Net12: 1
 IrsinvRout 13A: 000000470A
 IrsSubRout No13B: 00
 Latitude 16: 39d 33' 14"
 Longitude 17: 105d 05' 08"
 Range18A: 69 W
 Township18B: 69
 Section18C: 2
 Detour Length 19: 0.6 mi
 Toll Facility 20: 3
 Custodian 21: 1
 Owner 22: 1
 Functional Class 26: 12
 Year Built 27: 1987
 Lanes on 28A: 2
 Lanes Under 28B: 8
 ADT 29: 28,600
 Year of ADT 30: 2007
 Design Load 31: 6
 Apr Rdwy Width 32: 38.0 ft
 Median 33: 1
 Skew 34: 41.00 °
 Structure Flared 35: 0
 Sfty Rail 36a/b/c/d: 1 1 1 1
 Rail ht36h: 36 "in"

Hist Signif 37: 5
 Posting status 41: A
 Service on/un 42A/B: 6 1
 Main Mat/Desgn 43A/B: 6 5
 Appr Mat/Desgn 44A/B: 0 0
 Main Spans Unit 45: 2
 Approach Spans 46: 0
 Horiz Clr 47: 38.0 ft
 Max Span 48: 141.0 ft
 Str Length 49: 283.3 ft
 Curb Wdth L/R 50A/B: 0.0 ft 0.0 ft
 Width Curb to Curb 51: 38.0 ft
 Width Out to Out 52: 41.5 ft
 Deck Area: 11,756.9 sq. ft
 Min Clr Ovr Brdg 53: 99.99
 Min Undrclr Ref 54A: H
 Min Undrclr 54B: 16.3 ft
 Min Lat Clrnce Ref R 55A: H
 Min Lat Undrclr R 55B: 20.0 ft
 Min Lat Undrclr L 56: 5.00000015
 Deck 58: 7
 Super 59: 8
 Sub 60: 7
 Channel/Protection 61: N
 Culvert 62: N
 Oprtng Rtg Method 63: 1 LF Load Factr
 Operating Rating 64: 66.0
 Inv Rtn Method 65: 1
 Inventory Rating 66: 39.0
 Asph/Fill Thick 66T: 004 "in"
 Str. Evaluation 67: 7
 Deck Geometry 68: 6
 Undrclr Vert/Hor 69: 5
 Posting 70: 5
 Waterway Adequacy 7: N
 Approach Alignment 72: 8
 Type of Work 75A:
 Work Done By 75B:
 Length of Improvment 76: 0.0 ft
 Insp Team Indicator 90B: GREEN TEAM
 Inspector Name 90C: BUTKOVICHJ
 Frequency 91: 24 months
 FC Frequency 92A: -1
 UW Frequency 92B: -1
 SI Frequency 92C: -1
 FC Inspection Date 93A:

UW Inspection Date 93B:
 SI Date 93C:
 Bridge Cost 94: \$ 0
 Roadway Cost 95: \$ 0
 Total Cost 96: \$ 0
 Year of Cost Estimate 97:
 Brdr Brdg Code/% 98A/B:
 Border Bridge Number 99:
 Defense Highway 100: 0
 Parallel Structure 101: L
 Direction of Traffic 102: 1
 Temporary Structure 103:
 Highway System 104: 1
 Fed Lands Hiway 105: 0
 Year Reconstructed 106: 0000
 Deck Type 107: 1
 Wearing Surface 108A: 6
 Membrane 108B: 2
 Deck Protection 108C: 1
 Truck ADT 109: 5 %
 Trk Net 110: 1
 Pier Protection 111: #
 NBIS Length 112: Y
 Scour Critical 113: N
 Scour Watch 113M:
 Future ADT 114: 42,328
 Year of Future ADT 115: 2027
 CDOT Str Type 120A: CBGC
 CDOT Constr Type 120B: 10
 Inspection Indic 122A:
 Inspection Trip 122AA:
 Scheduling Status 122B:
 Maintenance Patrol 123: 17
 Expansion Dev/Type124:
 Brdg Rail Type/Mod 125A/B:
 Posting Trucks 129A/B/C: 0 0 0
 Str Rating Date 130: 6/12/1998
 Special Equip 133: -1
 Vert Clr N/E 134A/B/C: N 16.58 16.17
 Vert Clr S/W 135A/B/C: S 18.08 16.33
 Vertical Clr Date: 3/6/2012
 Weight Limit Color: 139: 0
 Str Billing Type: U
 Userkey 1 - System: ONSYS
 Userkey 7-Update Indic:

Inspector Name: BUTKOVICHJ

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Element Inspection Report

Elem/En	Description	Units	Total Qty	% in 1	CS 1	% in 2	CS 2	% in 3	CS 3	% in 4	CS 4	% in 5	CS 5
26/4	Conc Deck/Coatd Bars	(SF)	11,757	100 %	11,757	0 %	0	0 %	0	0 %	0	0 %	0
104/4	P/S Conc Box Girder	(LF)	849	100 %	849	0 %	0	0 %	0	0 %	0	0 %	0
210/4	R/Conc Pier Wall	(LF)	28	100 %	28	0 %	0	0 %	0	0 %	0	0 %	0
215/4	R/Conc Abutment	(LF)	110	100 %	110	0 %	0	0 %	0	0 %	0	0 %	0
302/4	Compressn Joint Seal	(LF)	110	100 %	110	0 %	0	0 %	0	0 %	0	0 %	0
321/4	R/Conc Approach Slab	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
325/4	Slope Prot/Berms	(EA)	2	100 %	1	0 %	1	0 %	0	0 %	0	0 %	0
326/4	Bridge Wingwalls	(EA)	4	0 %	0	100 %	4	0 %	0	0 %	0	0 %	0
331/4	Conc Bridge Railing	(LF)	566	100 %	566	0 %	0	0 %	0	0 %	0	0 %	0
340/4	Superstr Cnc Coating	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
341/4	Substr Conc Coating	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0

Elem/Env	Description	Element Notes
26/4	Conc Deck/Coatd Bars	4 inches of asphalt. A few longitudinal and random cracks that have been sealed.
104/4	P/S Conc Box Girder	Exterior looks good with only a short longitudinal crack with efflor., at the centerline of the bottom flange, near Abutment 1. The Left edge of Span 1 is scuffed from a high load, above the Right Southbound Wadsworth shoulder. Vehicle scrape in Span 2 above left turn lane, see 2012 PHOTO.
210/4	R/Conc Pier Wall	Looks good.
215/4	R/Conc Abutment	Look good.
302/4	Compressn Joint Seal	Located between approach slabs and roadway pavement. Asphalt cover has cracking at the both ends, and has been sealed in the past. Asphalt over the both joints has a 0.5 to 1.0 inch wide crack currently.
321/4	R/Conc Approach Slab	Covered with asphalt. Look good.
325/4	Slope Prot/Berms	The slope along wingwalls is settled; 6 inches at the Right Forward corner, 7 inches at the Left Forward corner, and 7 inches at the Left Rear corner. Settled 1 inch minimum at the face of both abutments. Light to moderate transverse and diagonal cracks in both, with slight buckling at the toe of #1, and buckled up to 3 inches high near the base of the slope between the 2 bridges.
326/4	Bridge Wingwalls	Light random cracks with moderate to heavy efflor. at #1 Left, #3 Left, and #3 Right. Subwing closure walls are spalled as noted: # 1 left spalled 17 in wide x 28 in tall x 8 in deep; #1 right spalled 16 in wide x 20 in tall x 8 in deep; #3 left spalled 16 in wide x 8 in tall x 3 in deep; # 3 right spalled 15 in wide x 48 in tall x 8 in deep with a 7 ft deep void behind wing and beneath approach rdwy, see 2012 PHOTO. All spalled areas have rebar corroded with up to 50% loss, but #3 right has some rebar failed with up to 100% loss, see 2012 PHOTO.
331/4	Conc Bridge Railing	Jersey barriers have typical light vertical cracks, and many scuffs from tires and scrapes from vehicles.
340/4	Superstr Cnc Coating	On girders and bridge rail. Scraped by a high load in Span 1, on the Left side. A few scrapes on the rail.
341/4	Substr Conc Coating	On wings, abutments, pier wall, and slope paving. Some peeling on the slope paving.

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Maintenance Activity Summary

MMS Activity	Description	Recommended	Status	Target Year	Est Cost
353.08	Br Dk Rpr	1/3/2002	-1	2014	1000

Seal the asphalt along the compression seals between approach slabs and approach roadway.

360.02	App SI & S	3/6/2012	_	2014	2000
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Fill 7 ft. deep void behind sub wing closure wall at right forward corner.

358.99	Substr	1/3/2002	-1	2014	20000
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Repair closure walls below approach slabs at all 4 corners, as per Centennial Engineering letter of 1989.

Bridge Notes

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Inspection Notes

Time: 11:05	Temperature: 66 Degrees	Weather: Clear	Team Leader: JWB
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Scope:

☒ NBI: ☒ Element: ☐ Underwater: ☐ Fracture Critical: ☐ Other: **Type:** Regular NBI

Inspector: BUTKOVICHJ

Inspection Team:

Inspection Date: 03/06/2012

Inspector

Inspector